



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/634,291 | 08/05/2003 | Cyrus Pershing Henry | YOUZ 2 00087 | 7979 |
| 27885 | 7590 | 12/14/2005 | EXAMINER | |
| FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114 | | | TOOMER, CEPHIA D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1714 | |
| DATE MAILED: 12/14/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/634,291

Applicant(s)

HENRY ET AL.

Examiner

Cephia D. Toomer

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4, 28 and 40-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is rejected because it does not refer back to a previous claim.

Claim 28 is rejected because n is 0 in claim 18 and there would be no $(CH_2)_n$ group.

Claims 40-44 are rejected because they are dependents of both claim 1 and any of the claims preceding them, which includes claim 1.

4. Claims 41-44 provide for the use of inhibition of oxidation; inhibition of deposit formation; inhibition of particulate formation; solubilisation of deposits and/or deposit precursors, respectively, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass.

Art Unit: 1714

A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 41-44 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

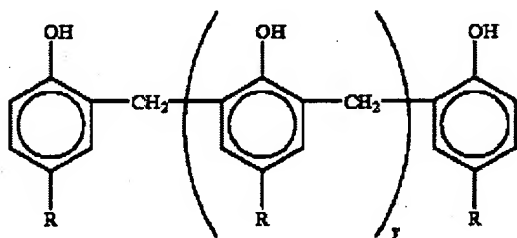
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5-8, 10, 13, 19-26, 28, 34, 35 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Caprotti(US 6,248,142).

Caprotti teaches a jet fuel composition comprising from 10-10000 ppm of a alkylated phenol



Art Unit: 1714

wherein R is C₉-C₂₄ alkyl and y is 0-4 (see abstract; col. 1, lines 56-65; coil. 2, lines 28-44; col. 3, lines 30-39; claim 1). Caprotti teaches that the antioxidants and metal deactivators may be present in the composition of his invention. Caprotti inherently teaches the method of claim 45 because he teaches the same fuel composition used in the same environment.

Accordingly, Caprotti teaching all the limitations of the claims anticipates the claims.

7. Claims 1-5, 7-9, 11-18, 27, 34, 35 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Machleder (US 4,134,846).

Machleder teaches a fuel composition comprising a polyalkylene phenol (see abstract). The phenol is present in the fuel at a concentration of about 100-650 ppm (see col. 1, lines 36-46), the polyalkylene substituent has a molecular weight of about 500-3000 and may be polyisobutylene (see col. 7, lines 23-35). The fuel may be jet fuel and may contain antioxidants and metal deactivators (see col. 9, lines 47-64; col. 10, lines 1-2). Machleder inherently teaches the method of claim 45 because he teaches the same fuel composition used in the same environment.

Accordingly, Machleder teaching all the limitations of the claims anticipates the claims.

Art Unit: 1714

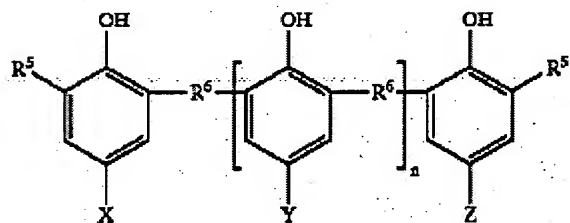
Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 5-17, 19-26, 29, 30, 34-40 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson US20050115146.

Jackson teaches a hydrocarbon fuel composition comprising an antioxidant such as 4-methyl-2,6-di-t-butylphenol, a coupled alkylphenol



wherein R^5 is tertiary alkyl of 4-8 carbon atoms, n is from 0-4 and X, Y and Z are independently H or a hydrocarbon radical containing from 1 to about 500 carbon atoms, (suggests polyalkenyl, polyisobutylene) (see abstract; paragraphs 23, 24, 29, 32, 42 and 46). The additive composition is present in the fuel in an amount from 0.1-40,000 ppm (paragraphs 44 and 45). The additional additives such as additional antioxidants and metal deactivators may be present in an amount from 0.1-40,000 ppm (see paragraph 46). Jackson teaches the limitations of the claims other than the differences that are discussed below.

In the first aspect, Jackson differs from the claims in that he does not specifically teach a jet fuel composition. However, it would have been obvious to one of ordinary skill in the art to use jet fuel because Jackson teaches that any normally liquid hydrocarbon fuel may be used and he teaches that the composition may be used in an aviation piston engines.

In the second aspect, Jackson differs from the claims in that he does not specifically teach the method of claim 45. However, given that Jackson teaches a compound similar to that of the present invention and he teaches that the fuel composition may be used in aviation engines, it would be reasonable to expect that the formation of deposits would be inhibited, especially in view of Applicant's only method step is combining the jet fuel and compound.

10. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson as applied to claims above, and further in view of Knapp (US 3,145,176).

Jackson has been discussed above. Jackson fails to teach that the additional antioxidants of his invention are phosphonates. However, Knapp teaches that C₁-C₁₂ dialkyl phosphonates (dilauryl) are used as antioxidants in hydrocarbon fuel (see col. 2, lines 1-9; col. 4, lines 54 through col. 5, lines 1-8).

It would have been obvious to one of ordinary skill in the art to include phosphonates in the fuel composition because Jackson teaches that additional conventional antioxidants may be present and Knapp teaches that phosphonate antioxidants are used to stabilized fuel compositions.

Art Unit: 1714

11. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson as applied to claims above, and further in view of EP 482253.

Jackson has been discussed above. Jackson fails to teach the claimed metal deactivator. However, EP teaches this compound in a hydrocarbon fuel composition (see page 2, lines 1-3; page 7, lines 26-36).

It would have been obvious to one of ordinary skill in the art to have selected the claimed metal deactivator because Jackson teaches that a conventional metal deactivator may be present in his composition and EP teaches that N,N-disalicylidene-1,2-propanediamine is a conventional metal deactivator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Cephia D. Toomer', with a long horizontal line extending to the right.

Cephia D. Toomer
Primary Examiner
Art Unit 1714

10634291\121005